AMENDMENTS TO THE CLAIMS

Claims 1 – 10. (Cancelled)

11. (Currently Amended) A wavelength converter for implementing wavelength conversion from input light of a first wavelength by a nonlinear optical phenomenon to generate converted light of a second wavelength different from the first wavelength, said wavelength converter comprising:

an optical fiber having a chromatic dispersion whose absolute value at least in the wavelength range of 1530 nm to 1565 nm is 0.2 ps/nm/km or less and a dispersion slope whose absolute value at a wavelength of 1550 nm is 0.01 ps/nm^2/km or less.

12. (Original) A wavelength converter according to claim 11, wherein said optical fiber has a nonlinear coefficient of 10 (1/W/km) or more at the wavelength of 1550 nm.

13. (Original) A wavelength converter according to claim 11, wherein said optical fiber has a transmission loss of 1 dB/km or less at the wavelength of 1550 nm.

14. (Original) A wavelength converter according to claim 11, wherein a threshold for occurrence of Stimulated Brillouin Scattering is. 10 dBm or more, with respect to the pumping light inputted.

15. (Original) A wavelength converter according to claim 11, further comprising:

an optical component located on a light output end side of said optical fiber, for blocking the pumping light having propagated through said optical fiber.

16. (Previously Presented) A wavelength converter for implementing wavelength conversion from input light of a first wavelength by a nonlinear optical phenomenon to generate converted light of a second wavelength different from the first wavelength, said wavelength converter comprising:

an optical fiber having at least two zero-dispersion wavelengths in the wavelength range of 1300 nm to 1700 nm, wherein

a threshold for occurrence of Stimulated Brillouin Scattering is 10 dBm or more, with respect to the pumping light inputted.

17. (Original) A wavelength converter according to claim 16, wherein said optical fiber has a nonlinear coefficient of 10 (1/W/km) or more at the wavelength of 1550 nm.

18. (Original) A wavelength converter according to claim 16, wherein said optical fiber has a transmission loss of 1 dB/km or less at the wavelength of 1550 nm.

19. (Cancelled)

20. (Original) A wavelength converter according to claim 16, further comprising:

an optical component located on a light output end side of said optical fiber, for blocking the pumping light having propagated through said optical fiber.

21. (Original) A wavelength converter for implementing wavelength conversion from pumping light of at least one pumping channel and signal light of at least one signal channel by a nonlinear optical phenomenon to generate converted light of at least one channel, said wavelength converter comprising:

a pumping light source in which a wavelength of the pumping channel is tunable; and

an optical fiber having a dispersion slope whose absolute value at the wavelength of the pumping light supplied from the pumping light source is 0.01 ps/nm^2/km or less.

22. (Original) A wavelength converter according to claim 21, wherein said optical fiber has a nonlinear coefficient of 10 (1/W/km) or more at the wavelength of 1550 nm.

23. (Original) A wavelength converter according to claim 21, wherein said optical fiber has a transmission loss of 1 dB/km or less at the wavelength of 1550 nm.

24. (Original) A wavelength converter according to claim 21, wherein a threshold for occurrence of Stimulated Brillouin Scattering is 10 dBm or more, with respect to the pumping light inputted.

25. (Original) A wavelength converter according to claim 21, wherein a permissive tunable width of the wavelength of the converted light outputted from said optical fiber is 20 nm or more.

26. (Original) A wavelength converter according to claim 21, wherein a permissive tunable width of the wavelength of the converted light outputted from said optical fiber is 20 nm or more, with respect to the signal channel at least in the wavelength range of 1530 nm to 1565 nm.

27. (Previously Presented) A wavelength converter according to claim 21, further comprising:

an optical component located on a light output end side of said optical fiber, for blocking the pumping light having propagated through said optical fiber.